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**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
097046,007	03/23/98	HAN	HT98-002

GEORGE O SAILE
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POUGHKEEPSIE NY 12603

IM22/0410

EXAMINER
AHMED, S

ART UNIT	PAPER NUMBER
1746	17

DATE MAILED: 04/10/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

NOTICE OF ALLOWANCE AND ISSUE FEE DUE

GEORGE D. SAYS
20 DECEMBER 1999

06/17/00

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/046,400	03/21/99	003	AMM D, S	1746 04/10/99
First Named Applicant	HAN, J.	35 USC 154(b) Term ext. = 0 Days.		

TITLE OF INVENTION: METHOD FOR FORMING A SOFT-ADJACENT LAYER (SAL) MEMBRANE DUE TO A
(NP) SENSOR ELEMENT WITH TRANSVERSELY MAGNETICALLY PLATED SOFT
MATERIAL COATING (SAL)

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
1190-002	7-00	000	1-01	NO	\$1200.00	07-10-00

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.

II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number.

Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PATENT AND TRADEMARK OFFICE COPY

Notice of Allowability

Application No.
09/046,007

Applicant(s)
HAN et al.

Examiner
Shamim Ahmed

Group Art Unit
1746



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to 2/4/2000

☒ The allowed claim(s) is/are 21-28

☐ The drawings filed on _____ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☐ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☐ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____

☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance

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Allowable Subject Matter

1. Claims 21-28 are allowed.
2. The following is an examiner's statement of reasons for allowance: The provisional obviousness-type double patenting rejection and the claim rejection-35 USC 103(a) are withdrawn because the secondary reference Sato (5,992,004) fails to teach the magnetoresistive (MR) layer and the soft adjacent layer (SAL) is separated by a dielectric layer. So, it would not be obvious to modify the Application Serial No. 09/046,008 (Patent No.6,007,731) in combination of Sato and Chouck (5,753,131) because Sato's non-magnetic conductor spacer layer in between MR and SAL layer, is different than the dielectric spacer layer as taught by Chouck and also as context of claim 21.
3. The closest prior art, Sato et al disclose that two magnetic layers (21 and 23) made out of Ni-Fe alloy are separated by a non-magnetic layer and an antiferromagnetic layer (24) of Fe-Mn alloy is contacting a surface of the SAL layer (col.13, lines 42-col.14, lines 8 and figure 9) but fails to teach that the magnetic layers are separated by a dielectric layer.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kroes et al (5,923,505), Kobayashi et al (5,754,376), Gill et al (5,508,866) and Watanabe et al (5,694,275) disclose a conventional magnetoresistive(MR) head fabrication process, wherein the MR layer and the SAL layer are separated by a non-magnetic spacer layer but not by a dielectric layer as claimed.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shamim Ahmed whose telephone number is (703) 305-1929.

SA

March 28, 2000



RANDI GULAROWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700